

Title: The association between work-related breastfeeding policies and breastfeeding initiation and duration: Population level data from 57 low-and-middle-income countries

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ABSTRACT

Objectives: Breastfeeding is associated with myriad health benefits for both women and children. Women may have to return to work following their child's birth and may discontinue breastfeeding during their child's two first years of life. Country-level policies that guarantee paid or unpaid maternity leave or that allow women to take additional breaks at work to pump or hand express their breast milk may help women continue breastfeeding during the first two years of life in keeping with the World Health Organization's recommendations for breastfeeding duration.

Methods: We used yearly data on national maternity leave and breastfeeding breaks at work (BBW) policies and population-level data from the Demographic and Health Surveys to estimate the association between three separate permissive maternity leave policies and women's initiation and duration of breastfeeding in 57 countries. We used Poisson models to estimate the association between the policy and the probability of breastfeeding initiation and Cox proportional hazards models to estimate the relationship between the policies with breastfeeding duration. We stratified our survival models by DHS region to allow for variations in the underlying baseline hazard across regions.

Results: After applying propensity score matching to ensure that our samples of exposed and unexposed women were comparable, exposure to maternity leave and BBW policies was not significantly associated with the likelihood of breastfeeding initiation. While permissive leave policies were associated with the duration of breastfeeding, the association was modified by the type of work and by household socio-economic status.

Conclusions for practice: In a multi-country analysis of permissive leave policies, living in a country that had implemented permissive maternity leave policies prior to the child's birth was not associated with breast feeding initiation. Across most regions, women breastfed for longer in countries with permissive maternity leave or BBW policies when compared to similar women in countries without the policy. Overall, women at the highest levels of socio-economic status (SES) were more likely to breastfeed for longer than women of lower SES. Policies became more closely associated with breastfeeding duration over time.

Keywords: breastfeeding breaks at work; maternity leave; propensity score matching; stratified Cox proportional hazards; survival analysis

Introduction

Breastfeeding is central to infant health and survival [1]. Breast milk is nutritionally superior to formula, allows for the transfer of antibodies from mother to infant, and reduces the risk of diarrheal disease and the development of allergies [2]. In addition to the immediate effects on infant health, breastfeeding has been tied to long term outcomes including school performance, productivity, and intellectual development [3]. Breastfeeding has important effects on maternal health; women who breastfeed have a lower risk of postpartum hemorrhage [4] and many women effectively use exclusive breastfeeding to space their pregnancies [5]. The World Health Organization (WHO) recommends exclusive breastfeeding for the first 6 months of life and continued breastfeeding with the addition of complimentary foods from six months to two years of age [6].

Ensuring that women can continue to breastfeed after returning to work is a global issue. Prior research in high income countries suggests that maternity leave policies increase the duration of breastfeeding [7-9]. A prior ecologic study of low-and-middle-income countries (LMIC) indicates that maternity leave and breast feeding breaks at work (BBW)-related policies may help women to continue breastfeeding [10]. This study utilizes individual-level data from 57 LMIC to estimate whether three separate permissive maternity leave policies are associated with (1) the initiation of breastfeeding and (2) breastfeeding duration.

Methodology

This study uses yearly data on national maternity leave and BBW policies collected by researchers at the WORLD Policy Analysis Center. The WORLD Policy Analysis Center identified 182 countries with data on national maternity leave and BBW policies between 2004 and 2013 (Please see Online Resource 1 for a detailed explanation of the creation of the policy database). In this study, we consider three separate

permissive maternity leave policies: the presence of country-level policies that guarantee (1) paid or unpaid BBW of any duration; (2) paid maternity leave and/or paid BBW for at least 6 months after birth, in keeping with the WHO recommendations for the maintenance of exclusive breastfeeding [11]; (3) at least 14 weeks of paid maternity leave, in keeping with the International Labor Organization's standards [12]. The outcomes of interest are (1) whether women initiated breastfeeding and, for women who initiated breastfeeding, (2) breastfeeding duration. This analysis uses outcome data from the most recent Demographic and Health Surveys (DHS), population-representative surveys that focus on maternal and child health and that are administered by MEASURE DHS and their in-country partners. The analysis is limited to the 57 countries for which we had both policy data and a DHS survey during the period from 2004 to 2012. Our analysis of breastfeeding duration was limited to the subset of 36 countries that collected breastfeeding duration data. While, in most country surveys, the DHS collects self-reported information on breastfeeding duration for all children born in the last five years, the DHS only collects information on the receipt of antenatal care for the last born child, thus we restrict our inference to women's most recent birth within the five years prior to the date of interview. We report the exclusions involved in the formation of the analysis dataset in Figure 1.

Statistical Methods

In consultation with subject matter experts, we constructed a directed acyclic graph to identify likely confounders prior to initiating the analysis. Because the women included in this analysis have not been randomized to the policy exposure, we need to control for factors that may confound the association between exposure to permissive maternity leave policies and women's initiation and duration of breastfeeding. We used 1-to-1 nearest neighbor propensity score (PS) matching with varying caliper sizes to ensure that important confounders, listed in Table I, were balanced across women in countries with and without the policy in question. With PS matching, we estimate the probability of receiving the "treatment," living in a country that has implemented the policy, and use this estimate to identify a sample from the

control group that "matches" the treatment group such that differences between women who live in countries that have and have not implemented the policy can be assumed to be a result of the policy [13]. We estimated separate PS for each policy and for the initiation and duration of breastfeeding. We chose the caliper size and method of control selection (selection with or without replacement) for each matched set after comparing the change in mean bias and sample size associated with each iteration of PS matching (See Online Resource 2 for a full description of the matching procedure selected for each of the six policy-outcome pairings).

Given that odds ratios estimated using logistic regression overestimate relative risks for prevalent outcomes [14], we used log binomial regression to estimate the relative risk of breastfeeding initiation. We included a random effect for country to account for country-level variation that was not explained by country-level covariates or the policy exposure and adjusted the standard errors for clustering at the country level. We used Cox proportional hazards (PH) models [15] to estimate the association between each policy and the likelihood of continuing to breastfeed (survival probability, $S(t)$). The Cox PH model assumes that the parameters act multiplicatively on the hazard and that the hazard ratio is constant over time [16]. To account for the selection bias introduced by conditioning on survival in the estimation of the hazard ratio, we have included the marginal survival curves for those exposed and not exposed to each policy [17]. We evaluated the proportionality assumption using log(-log) plots of the survivor function versus the log of time and scaled Schoenfeld residuals. Breastfeeding duration is reported in months; time zero is defined as the index child's birthdate. Observations were right censored at the child's date of death, after 24 months of breastfeeding duration, or at the date of survey for mothers who reported that they were currently breastfeeding.

Because permissive maternity leave policies are only likely to affect the breastfeeding behavior of women who would be exposed to the policies through their employment, we examined the potential for the

modification of the association of interest by the DHS's classification of women's work. While the DHS collects data on whether women worked in the last year, we were not able to determine women's employment status at the time of the index child's birth. Women who reported regularly working in a field other than domestic or agricultural work; working for cash rather than in kind; or working for someone other than themselves or their relatives were classified as working in a sector that was likely to be affected by the policy (Please see Online Resource 3 for a detailed description of the creation of the compound work variable). We also examined whether the association between permissive maternity leave policies and women's initiation and duration of breastfeeding differed across levels of household socio-economic status, estimated using the DHS's country-specific compound measure of household wealth, described in detail elsewhere [18]. We used likelihood ratio tests to evaluate the predictive value of the pre-specified interaction terms (at $\alpha=0.05$).

We used a one year lag for all policy exposures and country-level measures of per capita gross domestic product, health expenditures, percentage of the total labor force that is female, and percentage of the population that is urban. We used chi-squared tests to compare the probability of the outcome for observations with and without missing information on important confounders. Observations with missing information on important confounders ($n=7,868$) were as likely to initiate breastfeeding as observations without missing information ($p\text{-Value}=0.003$; $\alpha = 0.05$) and were excluded from the multivariate analysis. All analysis were conducted using Stata version 13.0 (StataCorp LP, College Station Texas). The research protocol was approved by the Research Ethics and Compliance Institutional Review Board at McGill University, Montréal, Canada.

Results

Of the 532,928 observations in the initial dataset, we excluded 40 births to women who were under the age of 15; 155,651 births because they were not the last born child; and 162,809 births for which we had

missing information on important confounders. For the remaining observations, 95% (n=351,418) had breastfed their child and 5% (n=18,661) had not. In the duration dataset, we excluded observations from the 21 countries that did not collect information on breastfeeding duration. Table II demonstrates the distribution of policy exposures and the availability of duration data for all of the countries included in the analysis. The proportion of women that initiated breastfeeding differed significantly between countries with and without both a BBW policy and a policy guaranteeing at least 14 weeks of paid maternity leave (p-Value=0.03; p-Value < 0.001, respectively) but did not differ between countries that had or had not implemented at least 6 months of BBW or maternity leave (p-Value: 0.015) the three policies examined in this study (p < 0.05).

Association between maternity leave and/or BBW policies and probability of initiating breastfeeding

Table III presents descriptive statistics for the unmatched breastfeeding initiation dataset. Prior to matching, the initial analysis dataset for breastfeeding initiation consisted of 369,369 infants and children. For the association between BBW and breastfeeding initiation, we selected 1:1 nearest neighbor matching without replacement and used a 0.001 caliper; 110,620 participants were retained after matching. For the association between at least 6 months of either maternity leave or BBW and breastfeeding initiation, we selected 1:1 nearest neighbor matching without replacement and used a 0.002 caliper; 129,072 participants were retained after matching. Finally, for the association between at least 14 weeks of paid maternity leave and breastfeeding initiation, we selected 1:1 nearest neighbor matching without replacement with a 0.04 caliper; 167,468 participants were retained post matching. The reduction in mean bias from the unmatched to the matched samples for each policy is shown in Figure II.

We used multilevel log-binomial regression with a random effect for country to estimate the risk of breastfeeding initiation in countries that had versus in countries that had not initiated each of the three policies. The results of the multilevel log-binomial regressions are shown in Table IV. While we explored the possibility of a non-linear association between the propensity score and the outcome by including a squared term for the propensity score, this did not contribute significantly to the model fit. The interaction term for the restricted definition of work was not significant in any of the models. There was limited evidence of an interaction between the medium and highest quintiles of household wealth and the policy exposure in the adjusted models. Estimates of the association between each of the policies and breastfeeding initiation were not significant and centered on the null value for both the null and adjusted models.

Association between maternity leave and/or BBW policies and breastfeeding duration

Table V presents descriptive statistics for the unmatched breastfeeding duration dataset. Prior to matching, the initial analysis dataset for breastfeeding duration included 237,391 observations from 36 countries. For the association between BBW and breastfeeding duration, we selected 1:1 nearest neighbor matching without replacement and used a 0.01 caliper; 71,068 participants were retained after matching. For the association between at least 6 months of either maternity leave or BBW and breastfeeding duration, we selected 1:1 nearest neighbor matching without replacement and used a 0.003 caliper; 67,434 participants were retained after matching. Finally, for the association between at least 14 weeks of paid maternity leave and breastfeeding duration, we selected 1:1 nearest neighbor matching without replacement with a 0.05 caliper; 64,608 participants were retained post matching. The reduction in mean bias following the PS matching procedures used to estimate the association between breastfeeding duration and each policy exposure is shown in Figure III.

We used Cox proportional hazards models stratified by region to allow for the baseline hazard to vary across regions and adjusted for the estimated propensity score as well as the policy, the restricted definition of work, the DHS wealth quintiles and the interaction between the policy and the definition of work and the policy and the wealth quintiles. While we assessed the possibility of a non-linear relationship between the propensity score and breastfeeding duration, the inclusion of different fractional polynomial terms for the propensity score did not contribute to model fit and were not included in the final models. The stratified hazard ratios for each of the three policies are reported in Table VI. Because the interaction terms between each policy and the restricted definition of work and each policy and the DHS household wealth quintiles were significant, HRs for each policy are reported within strata of these interaction terms. Each policy had a stronger association with the hazard of breastfeeding cessation for women who were classified as having the restricted versus the unrestricted definition of work. For both BBW and at least 6 months of maternity leave or BBW, the hazard of breastfeeding cessation was lower for women who lived in countries with permissive maternal leave policies than for women in countries without permissive maternal leave policies. The relationship between SES and the relative hazard of breastfeeding cessation did not hold for those exposed to at least 14 weeks of paid maternity leave versus those exposed to less than 14 weeks of paid maternity leave, wherein the hazard ratios were only statistically significant at the highest and lowest levels of SES.

In Figures IV to XIII, we present relative survival probabilities for countries that had and had not implemented each of the three permissive maternal leave policies, stratified by region. The relative survival graphs demonstrate significant regional variation in the association between permissive maternity leave policies and breastfeeding duration. In contrast to the other regions, in South Asia, women in countries that had not implemented BBW were more likely to continue breastfeeding than women in

countries that had implemented such policies, across SES levels and the restricted definition of work. Similarly, in Europe and Central Asia, living in a country with a policy that guarantees at least 14 weeks of paid maternity leave was associated with a decrease in breastfeeding duration, which in South Asia, the association was reversed and in Sub-Saharan Africa there was no clear association between the policy and breastfeeding duration.

Conclusions for Practice

Our results suggest that, while permissive maternal leave policies are not associated with the initiation of breastfeeding, they may allow women to breastfeed for longer. Permissive leave policies were more closely associated with continued breastfeeding at longer durations of breastfeeding. The association between permissive maternity leave policies was modified by household SES and by the way that women's work was defined in the sample. In general, permissive policies were more closely associated with increased breastfeeding duration among women classified as having intermediate and high SES than among women classified as having the lowest levels of SES.

Strengths & limitations of this study

This analysis has a number of important strengths. While the majority of studies on the effect of permissive maternity leave policies are conducted in high-income countries, this study explores the association between these policies and breastfeeding initiation and duration across a number of LMIC. This study uses a comprehensive global database to explore the association of permissive maternal leave policies and breastfeeding behavior. We employed PS matching to minimize the potential that our estimates were confounded by measured factors. The main limitation of this analysis is that the DHS does not include a measure of women's employment status prior to the birth of the index child. We used all of the information available from individual country surveys to develop a classification of women's

work intended to identify the women who were most likely to be exposed to the policy based on their occupation and their work history during the previous year. Because of our lack of temporal information on women's work, we are only able to estimate associations and cannot estimate the causal effect of the policies on breastfeeding initiation or duration. Additionally, only two countries (Colombia and the Philippines) provide a measure of the duration of exclusive breastfeeding. As such, we were not able to explore the association between permissive maternal leave policies and the duration of exclusive breastfeeding in this cross-country analysis.

Exclusive BF during the child's first 6 months and continued breastfeeding with the introduction of complimentary foods until age two have significant short and long term benefits for child health. Future research in LMIC should include temporal measures of women's work status to facilitate policy makers' understanding of the causal effect of permissive maternal leave policies on the duration of breastfeeding.

LIST OF ABBREVIATIONS

BBW, breastfeeding breaks at work; DHS, Demographic and Health Surveys; PH, proportional hazards; PS, propensity score; SES, socio-economic status

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

ACKNOWLEDGEMENTS

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Table I. Matching variables

Child level	Mother level	Household level	Country Level
Child's sex	Maternal age category	Number of household members (<7 vs >=7))	Natural log of per capita GDP
Received antenatal care	Maternal education	Wealth quintile	Natural log of percentage of population in urban centers
Birthplace (home, hospital/clinic, other)	Marital status	Rural location	Natural log of per capita health expenditures
Short preceding birth interval (<1 year vs >=1 year)	Likely worked in an industry affected by the policy		Natural log of percentage of women in the workforce
Firstborn child			

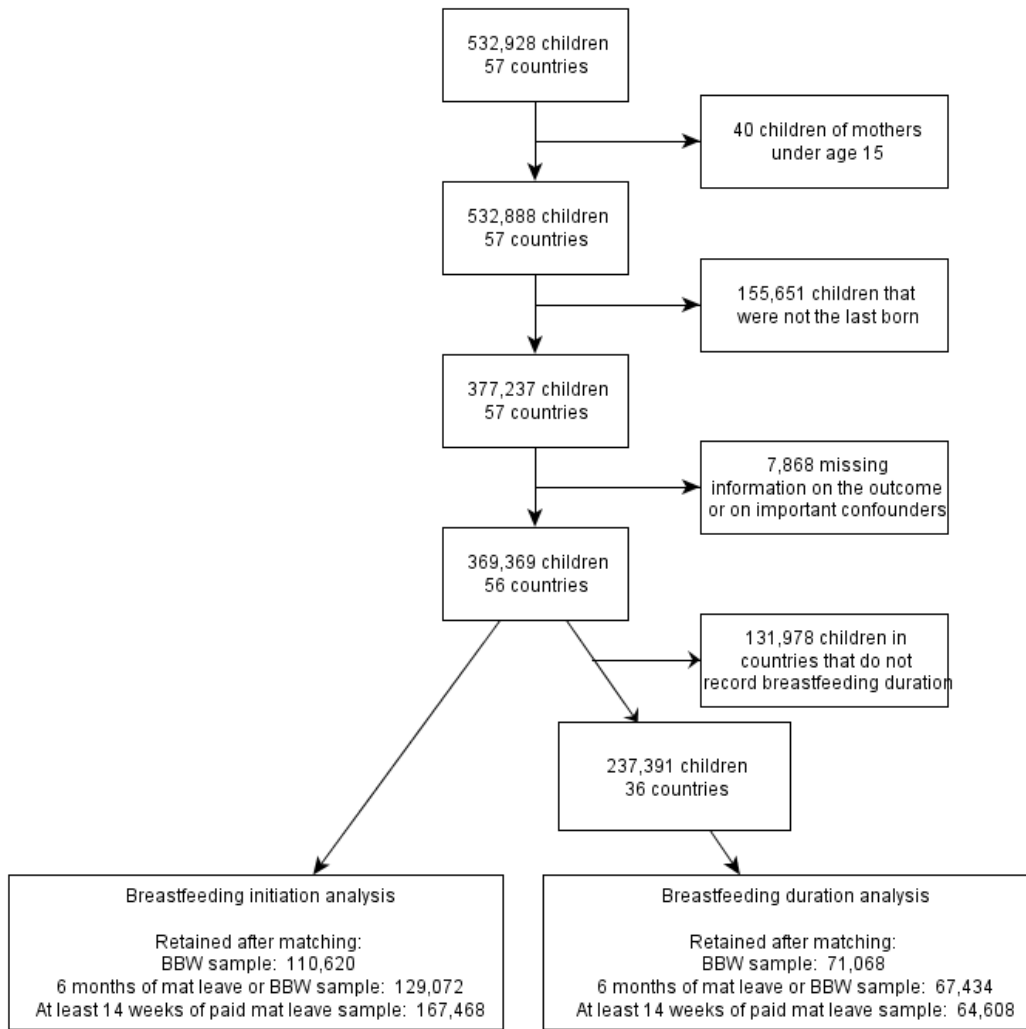


Figure I. Selection of observations into the breastfeeding initiation and duration analysis datasets

Table II: List of countries that collected breastfeeding duration data and that have and have not implemented permissive maternity leave policies from 2003-2012

Region	Duration data	Breastfeeding breaks at work		At least 14 weeks of maternity leave		6 months of maternity leave or BBW	
		Policy	No policy	Policy	No policy	Policy	No policy
Americas							
Bolivia	X		X		X	X	
Colombia	X		X		X	X	
Dominican Republic	X		X		X	X	
Guyana	X	X		X		X	
Haiti			X		X	X	
Honduras			X		X	X	
Peru	X		X		X	X	
East Asia & Pacific							
Cambodia			X		X	X	
Indonesia			X		X	X	
Philippines	X	X		X		X	
Timor-Leste	X		X	X		X	
Europe & Central Asia							
Albania	X		X		X		X
Armenia			X		X		X
Azerbaijan	X		X		X		X
Moldova	X		X		X		X
Tajikistan			X		X		X
Turkey	X		X		X	X	
Ukraine	X		X		X		X
Middle East & North Africa							
Egypt	X		X		X	X	
Jordan			X		X	X	
Morocco	X		X		X	X	
South Asia							
Bangladesh	X	X		X		X	X
India	X		X		X	X	
Maldives	X	X	X		X	X	
Nepal			X		X	X	
Pakistan		X		X		X	
Sub-Saharan Africa							
Benin	X		X		X		X
Burkina Faso			X		X		X
Burundi			X		X	X	
Cameroon	X		X		X		X
Chad	X		X		X		X
Congo			X		X		X
Cote d'Ivoire			X		X		X
Democratic Republic of Congo	X		X		X		X
Ethiopia		X		X		X	
Gabon			X		X		X
Ghana	X		X		X	X	
Guinea	X		X		X		X
Kenya	X	X		X		X	
Lesotho	X		X		X	X	
Liberia	X	X		X		X	
Madagascar	X		X		X		X
Malawi	X	X		X		X	
Mali	X		X		X		X
Mozambique			X		X	X	
Namibia	X	X		X		X	
Niger			X		X		X
Nigeria	X		X		X	X	
Rwanda			X		X	X	
Sao Tome et Principe	X		X		X	X	
Senegal			X		X		X
Sierra Leone	X	X		X		X	
Swaziland	X		X		X	X	

Region	Duration data	Breastfeeding breaks at work		At least 14 weeks of maternity leave		6 months of maternity leave or BBW	
		Policy	No policy	Policy	No policy	Policy	No policy
Tanzania	X		X		X		X
Uganda		X		X		X	
Zambia	X	X		X		X	
Zimbabwe			X		X	X	X

Table III: Breastfeeding Duration Sample Characteristics, Stratified by 3 Policy Exposures – from Demographic and Health Surveys (DHS) in 36 countries from 2003-2012 (Full, unmatched Sample, Children of 15-49 Year-Old Mothers)

Variable	Breastfeeding breaks at work		At least 14 weeks of paid maternity leave		6 months of maternity leave or BBW	
	Policy	No policy	Policy	No policy	Policy	No policy
	n=189,636 %	n=50,601 %	n=62,638 %	n=174,618 %	n=181,241 %	n=181,241 %
Age category						
15-19	7.5	8.1	9.2	7.1	7.6	8.1
20-29	52.1	52.8	50.6	52.8	52.5	51.3
30-39	32.2	31.3	31.6	32.1	32.0	31.8
40-49	8.2	7.8	8.5	8.0	7.9	8.8
Marital status						
never married	3.7	8.1	2.8	5.4	3.4	8.8
married/living together	90	84.2	91.9	87.6	90.2	83.9
widowed/divorced	2.7	4.0	2.1	3.3	2.7	3.8
not living together	3.5	3.6	3.2	3.7	3.6	3.5
Missing	0	0	0	0	0	0
Maternal education						
no education	32.9	20.8	45.7	25.1	33.2	22.0
Primary	27.6	44	27.1	32.4	27.5	42.3
Secondary	31.4	29.5	23.3	33.6	31	30.4
Higher	8.1	5.6	3.9	8.9	8.3	5.3
Missing	0	0.1	0	0	0	0
Child's sex						
Female	48.4	49.0	49.2	48.3	48.4	48.9
Male	51.6	51.0	50.8	51.7	51.6	51.1
Firstborn						
No	74.9	75.4	77.6	74.3	74.6	77.1
Yes	25.1	24.6	22.4	25.7	25.4	22.9
Antenatal care						
No	16.3	7.7	18.7	13.2	16.6	8.4
Yes	83.6	92.0	81.1	86.7	83.3	91.4
Missing	0.2	0.2	0.2	0.2	0.2	0.2
Short interval between births						
No	73.5	74.1	76.2	72.9	73.2	75.8
Yes	1.2	1.1	1.1	1.2	1.2	1.1
firstborn child	25.1	24.6	22.4	25.7	25.4	22.9
Missing	0.3	0.2	0.3	0.3	0.3	0.2
Birthplace						
Home	39.4	41.8	44.1	39	38.3	47
hospital or clinic	60.0	56.9	55.3	60.2	61.0	51.9
Other	0.5	1.0	0.3	0.7	0.5	0.9
Missing	0.1	0.2	0.2	0.1	0.1	0.2
More than 7 household members						
No	72.1	73.6	68.3	74.4	72.7	73.1
Yes	27.9	26.4	31.7	25.6	27.3	26.9
Rural						
Urban	40.5	27.1	34.9	39.1	41.2	27.4
Rural	59.5	72.9	65.1	60.9	58.8	72.6
Wealth quintile						
Poorest	22.6	22.8	21.3	23.1	22.6	22.6
Poorer	21.6	20.7	20.5	21.6	21.6	20.3
Middle	20.3	21.1	19.9	20.5	20.2	20.7
Richer	18.7	19.5	19.5	18.7	18.7	19.8
Richest	16.9	15.8	18.8	16	16.8	16.6
Initiated breastfeeding						
No	5.4	5.3	5.3	5.5	5.5	5.4
Yes	94.0	93.1	93.8	93.7	93.9	93.1
Missing	0.6	1.6	0.9	0.8	0.6	1.5
Mean breastfeeding duration (months)	14.0	15.6	14.5	14.2	14.1	15.1

Propensity Score Matching and Bias Reduction: 3 Policy Exposures

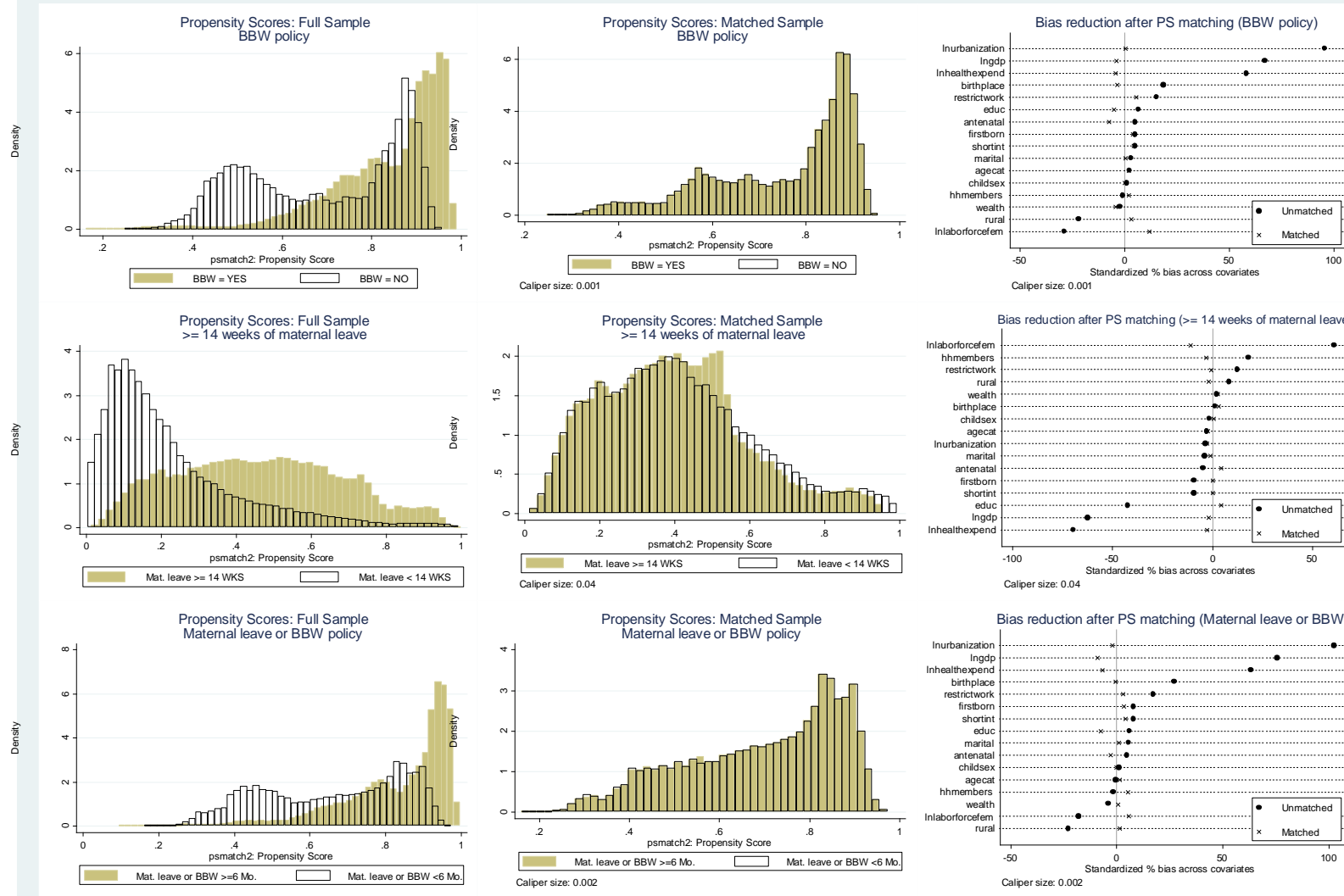


Figure II. Comparison of propensity score matched and unmatched samples and mean bias reduction for the three permissive maternity leave policies analyzed in the breastfeeding initiation analysis

Table V: Breastfeeding Initiation Analyses for 3 Policy Exposures: Risk Ratios (RRs) and 95% confidence intervals for the Multilevel Log-Binomial Regressions (Matched Samples, Children of Mothers Aged 15-49)

Policy	Breastfeeding Breaks at Work					At least 6 months of maternity leave or BBW					At least 14 weeks of paid maternity leave				
	1.009 (0.987 - 1.032)	1.008 (0.993 - 1.024)	1.008 (0.993 - 1.023)	1.003 (0.992 - 1.014)	1.006 (0.993 - 1.019)	1.010 (0.990 - 1.030)	1.008 (0.997 - 1.020)	1.007 (0.997 - 1.018)	1.000 (0.991 - 1.009)	1.006 (0.997 - 1.015)	1.000 (0.987 - 1.012)	1.000 (0.987 - 1.012)	0.999 (0.987 - 1.011)	0.996 (0.985 - 1.008)	1.000 (0.986 - 1.013)
1.wealth				0.999 (0.991 - 1.006)					0.996 (0.989 - 1.002)				0.996 (0.992 - 1.001)		
2.wealth				0.992 (0.982 - 1.003)					0.990** (0.982 - 0.998)				0.992*** (0.987 - 0.996)		
3.wealth				0.987 (0.970 - 1.004)					0.987* (0.974 - 1.001)				0.994* (0.988 - 1.000)		
4.wealth				0.980* (0.958 - 1.003)					0.980** (0.963 - 0.998)				0.985*** (0.977 - 0.994)		
policy#0b.wealth				1.000 (1.000 - 1.000)					1.000 (1.000 - 1.000)				1.000 (1.000 - 1.000)		
policy#1.wealth				1.000 (0.992 - 1.009)					1.004 (0.995 - 1.013)				1.001 (0.993 - 1.008)		
policy#2.wealth				1.009 (0.997 - 1.022)					1.013** (1.001 - 1.024)				1.007 (0.997 - 1.016)		
policy#3.wealth				1.011 (0.991 - 1.030)					1.014* (0.998 - 1.030)				1.003 (0.994 - 1.012)		
policy#4.wealth				1.010 (0.984 - 1.035)					1.014 (0.993 - 1.036)				1.009 (0.995 - 1.022)		
propensity score	0.921*** (0.888 - 0.955)	1.131 (0.894 - 1.431)	0.923*** (0.893 - 0.954)	0.922*** (0.889 - 0.955)		0.922*** (0.896 - 0.948)	1.126 (0.934 - 1.359)	0.924*** (0.900 - 0.948)	0.923*** (0.898 - 0.948)		1.008 (0.985 - 1.032)	1.109** (1.019 - 1.207)	1.009 (0.986 - 1.033)	1.009 (0.987 - 1.031)	
propensity score^2		0.855 (0.701 - 1.044)					0.849* (0.716 - 1.008)					0.900*** (0.836 - 0.970)			
Restrictwork				0.993 (0.981 - 1.005)					0.993 (0.983 - 1.004)					0.997 (0.992 - 1.003)	
policy#0b.restrictwork				1.000 (1.000 - 1.000)					1.000 (1.000 - 1.000)				1.000 (1.000 - 1.000)		
				1.007 (0.991 - 1.022)					1.006 (0.993 - 1.019)				1.000 (0.989 - 1.010)		
Observations	110,620	110,620	110,620	110,620	110,620	129,072	129,073	129,074	129,075	129,076	167,468	167,468	167,468	167,468	167,468
Number of countries	54	54	54	54	54	56	56	56	56	56	56	56	56	56	56

Results obtained from log binomial models with standard errors corrected for clustering at the country level. Propensity score 1:1 matching performed with a 0.001 caliper for "BBW", a 0.002 caliper for the "At least 6 months of maternity leave or BBW", and a 0.04 caliper for "At least 14 weeks of paid maternity leave",

*** p<0.01, ** p<0.05, * p<0.1

Table V: Breastfeeding Initiation Sample Characteristics, Stratified by 3 Policy Exposures – from Demographic and Health Surveys (DHS) in 56 countries from 2003-2012 (Matched sample, Children of 15-49 Year-Old Mothers)

Variable	Breastfeeding breaks at work		At least 14 weeks of maternity leave		6 months of maternity leave or BBW	
	Policy n=306,502 %	No policy n=70,735 %	Policy n=113,476 %	No policy n=260,780 %	Policy n=298,107 %	No policy n=75,889 %
Age category						
15-19	7.1	7.3	8.6	6.6	7.2	7.3
20-29	51.0	52.0	50.2	51.6	51.2	50.9
30-39	33.1	32.6	32.3	33.3	33	32.9
40-49	8.7	8.1	8.9	8.5	8.5	8.8
Marital status						
never married	3.9	6.2	4.1	4.5	3.8	6.9
married/living together	89.8	86.5	90.5	88.5	89.9	86.1
widowed/divorced	2.7	3.9	2.2	3.3	2.8	3.7
not living together	3.5	3.4	3.2	3.7	3.6	3.3
Missing	0	0	0	0	0	0
Maternal education						
no education	32.2	29.2	47.3	25.1	32.4	29.6
Primary	29.6	40.0	24.2	34.6	29.5	39.00
Secondary	30.9	24.9	24.7	31.8	30.6	25.8
Higher	7.3	5.8	3.7	8.6	7.4	5.6
Missing	0	0.1	0	0	0	0
Child's sex						
female	48.5	49.0	49.1	48.4	48.5	48.9
Male	51.5	51.0	50.9	51.6	51.5	51.1
Firstborn						
No	75.1	77.2	78.4	74.4	74.9	78.3
Yes	24.9	22.8	21.6	25.6	25.1	21.7
Antenatal care						
No	12.8	14.5	14.4	12.7	12.9	14.6
Yes	87.1	85.3	85.5	87.2	87	85.3
missing	0.1	0.1	0.1	0.1	0.1	0.1
Short interval between births						
No	73.7	75.7	77	73	73.5	76.8
Yes	1.1	1.3	1.1	1.2	1.1	1.3
firstborn child	24.9	22.8	21.6	25.6	25.1	21.7
missing	0.3	0.2	0.2	0.3	0.3	0.2
Birth place						
home	36.9	46.5	38.1	39.3	36.1	50.0
hospital or clinic	62.4	52.4	61.3	59.8	63.1	49.0
other	0.6	0.9	0.4	0.8	0.6	0.8
missing	0.2	0.2	0.2	0.2	0.2	0.2
More than 7 household members						
No	71.3	70.4	63.1	74.9	71.6	70.3
Yes	28.7	29.6	36.9	25.1	28.4	29.7
Residence						
Urban	38.2	27.8	33.7	37.7	38.6	28.0
Rural	61.8	72.2	66.3	62.3	61.4	72.0
Wealth quintile						
Poorest	23.6	23.5	23.3	23.8	23.7	23.3
Poorer	21.5	20.1	21	21.2	21.5	19.9
Middle	19.8	20.1	19.5	20.0	19.8	19.8
Richer	18.3	18.9	18.6	18.4	18.3	19.1
Richest	16.7	17.4	17.6	16.6	16.7	17.9
Initiated breastfeeding						
No	5.0	5.0	4.7	5.2	5.0	5.1
Yes	94.6	93.8	94.8	94.3	94.6	93.7
missing	0.4	1.2	0.6	0.6	0.4	1.2
Mean breastfeeding duration (months)	13.7	15.2	13.5	14.2	13.7	14.7

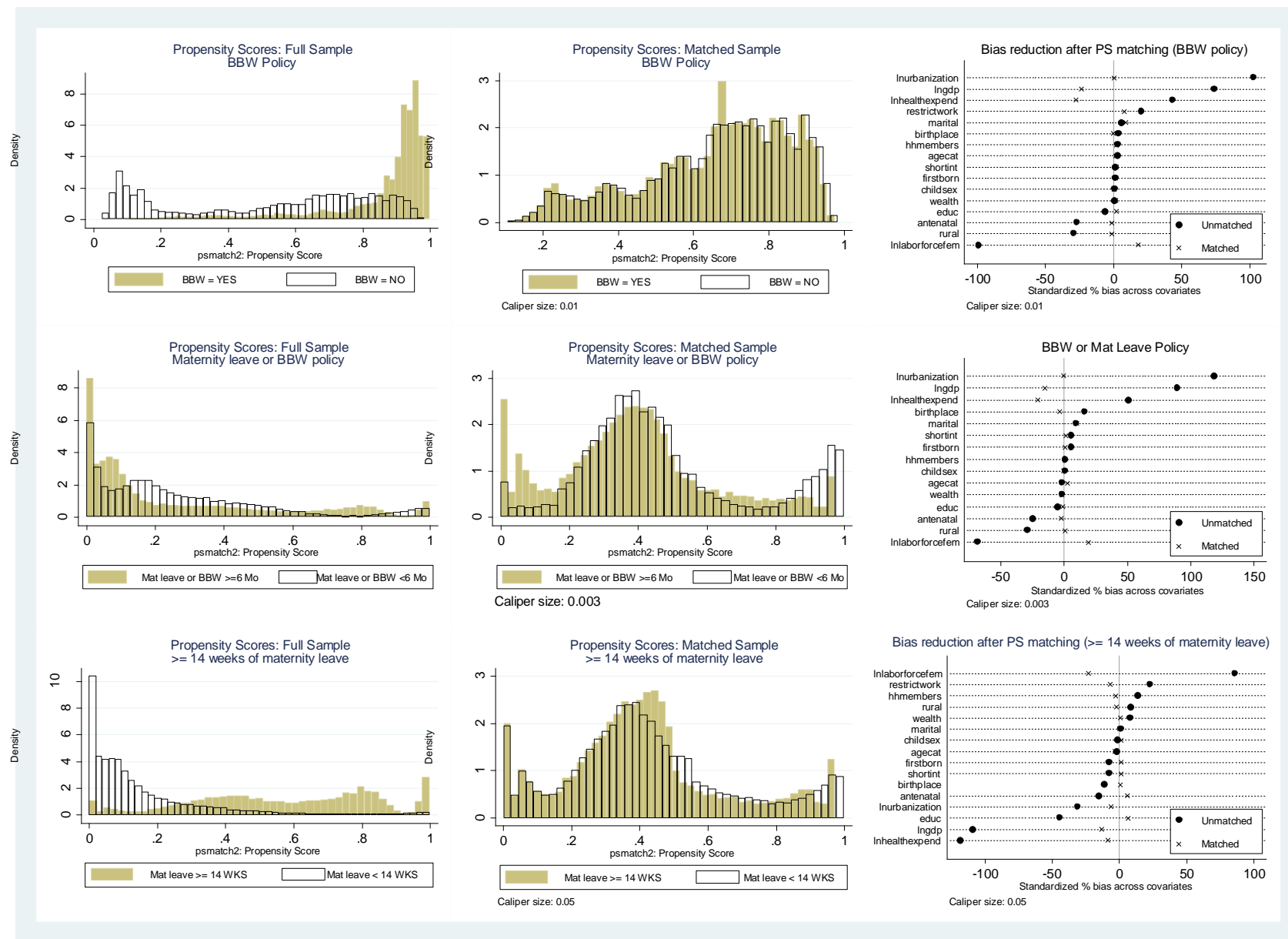


Figure III. Comparison of propensity score matched and unmatched samples and mean bias reduction for the three permissive maternity leave policies analyzed in the breastfeeding duration analysis

Table VI. Cox proportional hazards models for the association between permissive maternal leave policies and breastfeeding duration, stratified by geographic region, estimated using a separate propensity score-matched sample for each policy exposure

	Breastfeeding breaks at work		At least 6 months of maternity leave or BBW		At least 14 weeks of paid maternity leave	
	Restricted definition of work	Unrestricted definition of work	Restricted definition of work	Unrestricted definition of work	Restricted definition of work	Unrestricted definition of work
	N=28,824	N=31,109	N=22,898	N=27,102	N=27,834	N=26,998
Household wealth quintile	HR (95% CI)	HR (95% CI)	HR (95% CI)	HR (95% CI)	HR (95% CI)	HR (95% CI)
Poorest	0.85 (0.81, 0.89)	0.96 (0.91, 1.00)	0.83 (0.79, 0.88)	0.91 (0.86, 0.97)	0.88 (0.83, 0.93)	0.90 (0.86, 0.95)
Poor	0.80 (0.76, 0.85)	0.90 (0.86, 0.95)	0.81 (0.77, 0.86)	0.89 (0.84, 0.95)	0.97 (0.92, 1.02)	0.99 (0.94, 1.05)
Middle	0.80 (0.76, 0.84)	0.90 (0.85, 0.95)	0.83 (0.78, 0.87)	0.91 (0.86, 0.96)	0.99 (0.94, 1.04)	1.02 (0.97, 1.08)
Rich	0.78 (0.74, 0.82)	0.88 (0.83, 0.93)	0.86 (0.81, 0.91)	0.94 (0.89, 1.00)	0.97 (0.92, 1.02)	0.99 (0.94, 1.05)
Richest	0.72 (0.68, 0.76)	0.81 (0.77, 0.86)	0.80 (0.75, 0.84)	0.88 (0.82, 0.93)	0.91 (0.86, 0.96)	0.93 (0.88, 0.99)

BBW=breastfeeding breaks at work; HR=hazard ratio, CI=confidence interval

Standard errors adjusted for loss of information due to the Demographic and Health Survey's 2 stage sampling frame

Cox proportional hazards models, BW Policy: America's Region

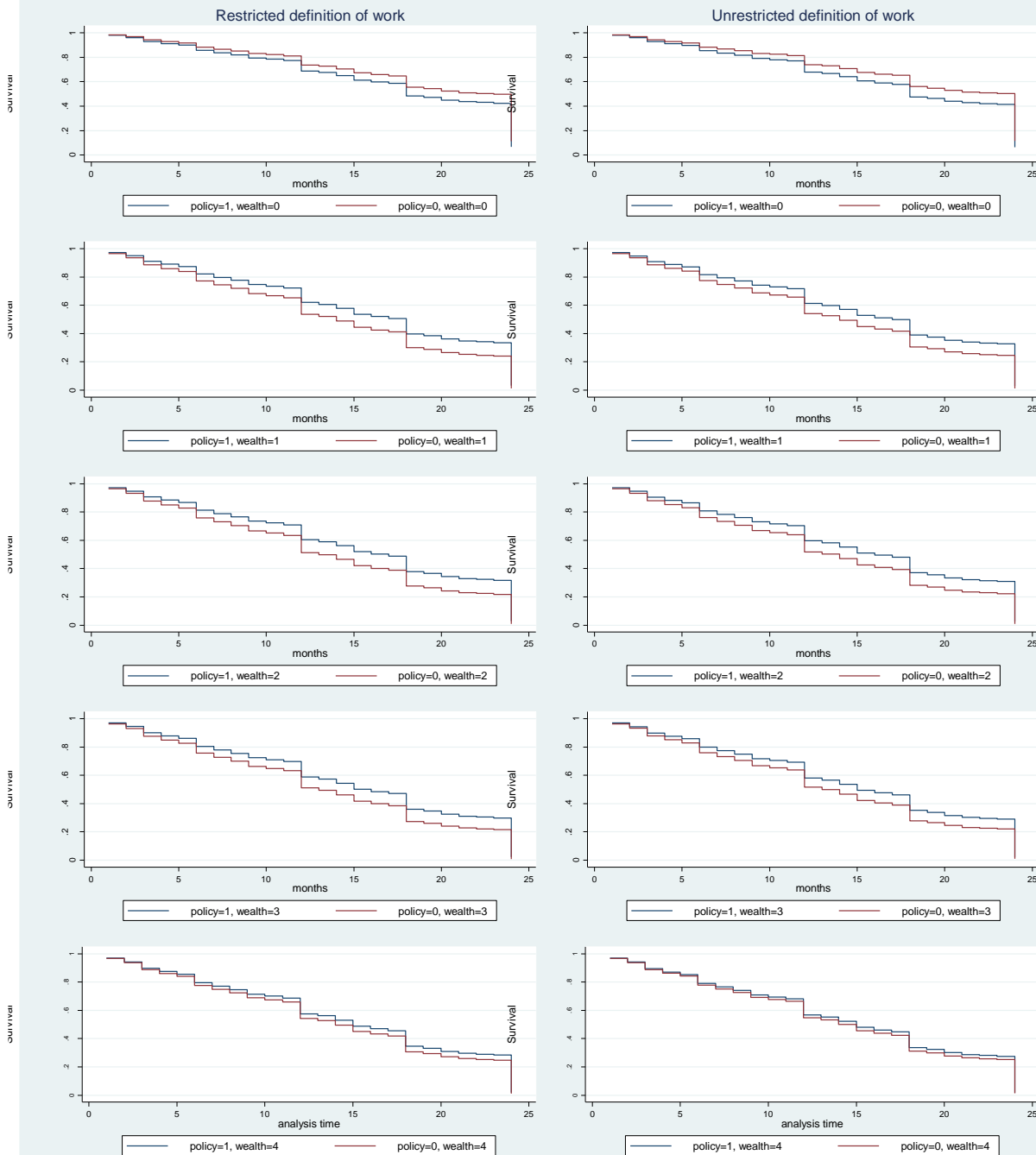


Figure IV. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted a policy to ensure breast feeding breaks at work (N=2,801; policy: Bolivia, Colombia, Dominican Republic, Peru; no policy: Guyana)

Cox proportional hazards models, BW Policy: East Asia & Pacific Region

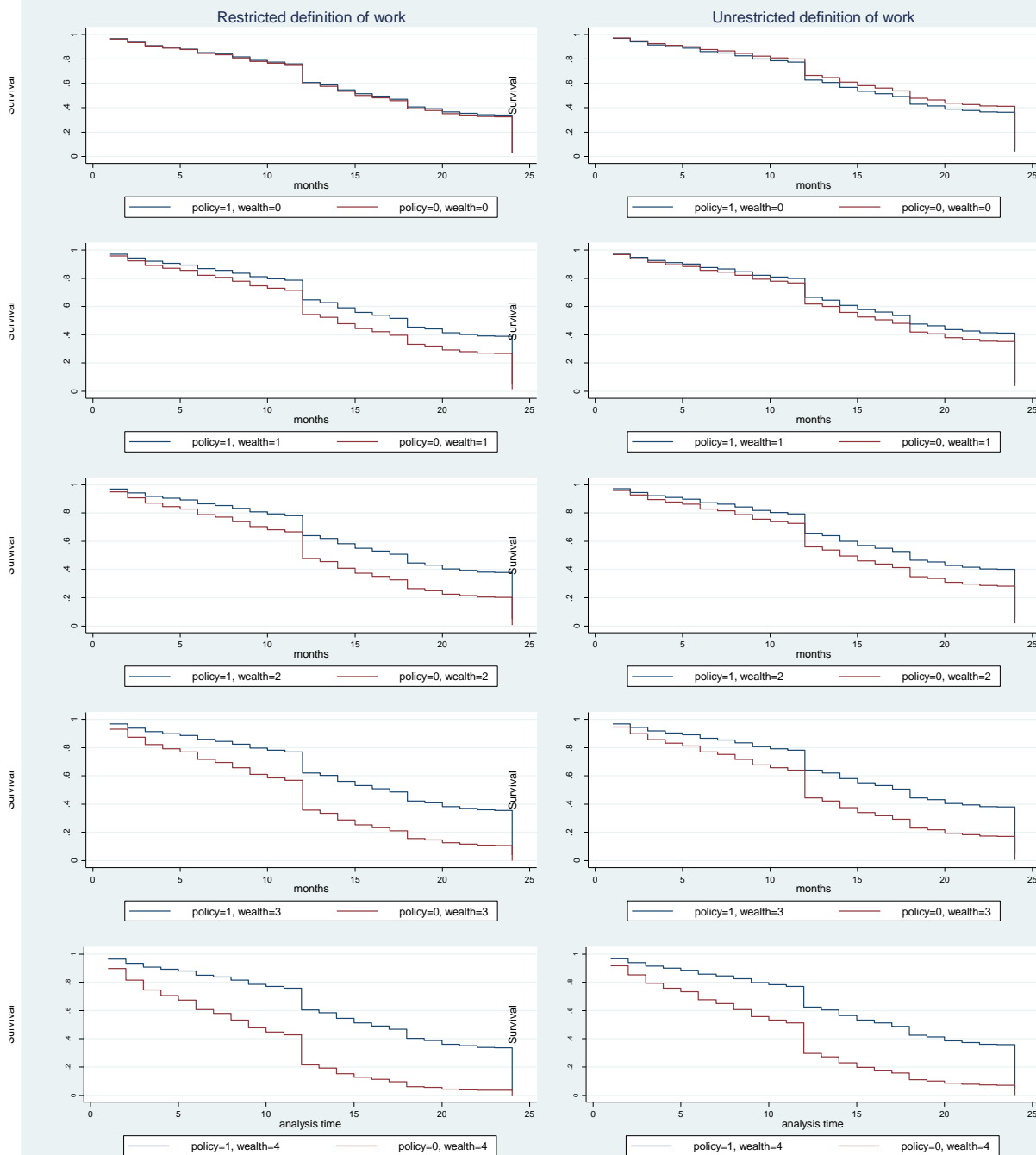


Figure V. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted a policy to ensure breast feeding breaks at work (N=5,351; policy: Timor-Leste; no policy: Philippines)

Cox proportional hazards models, BBW Policy: South Asia Region

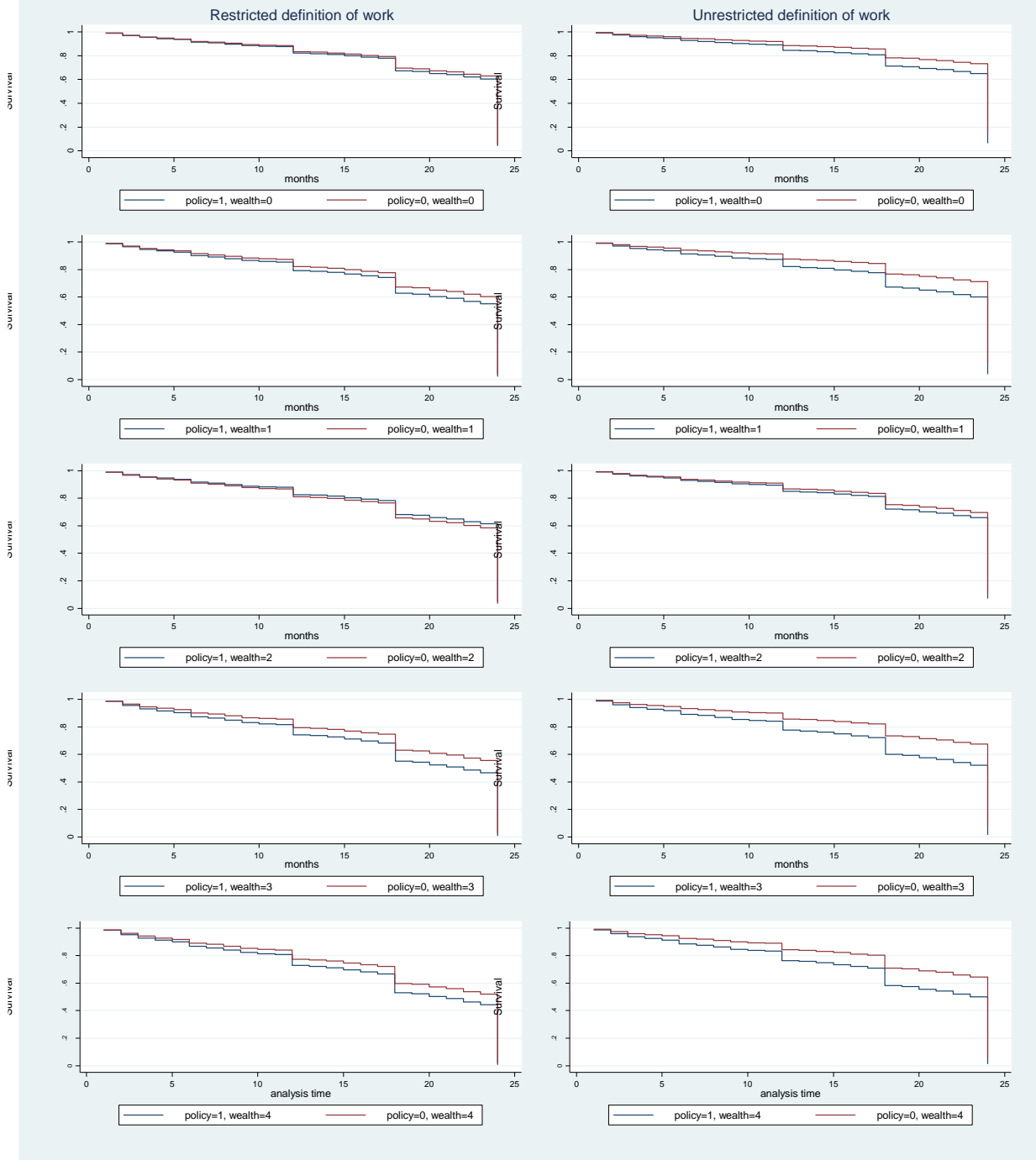


Figure VI. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted a policy to ensure breast feeding breaks at work (N=7,474; policy: India; no policy: Bangladesh, Maldives)

Cox proportional hazards models, BBW Policy: Sub-Saharan Region

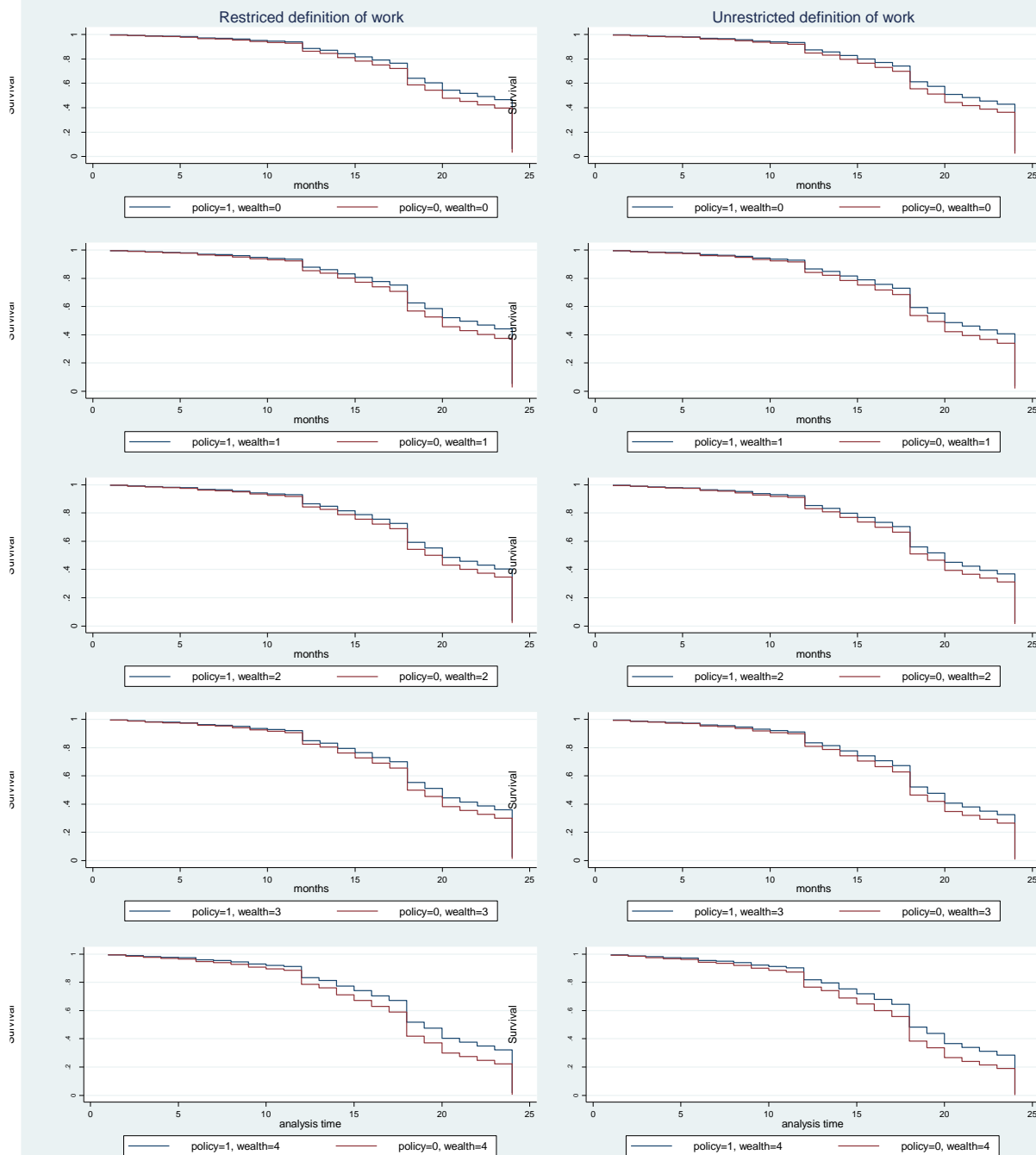
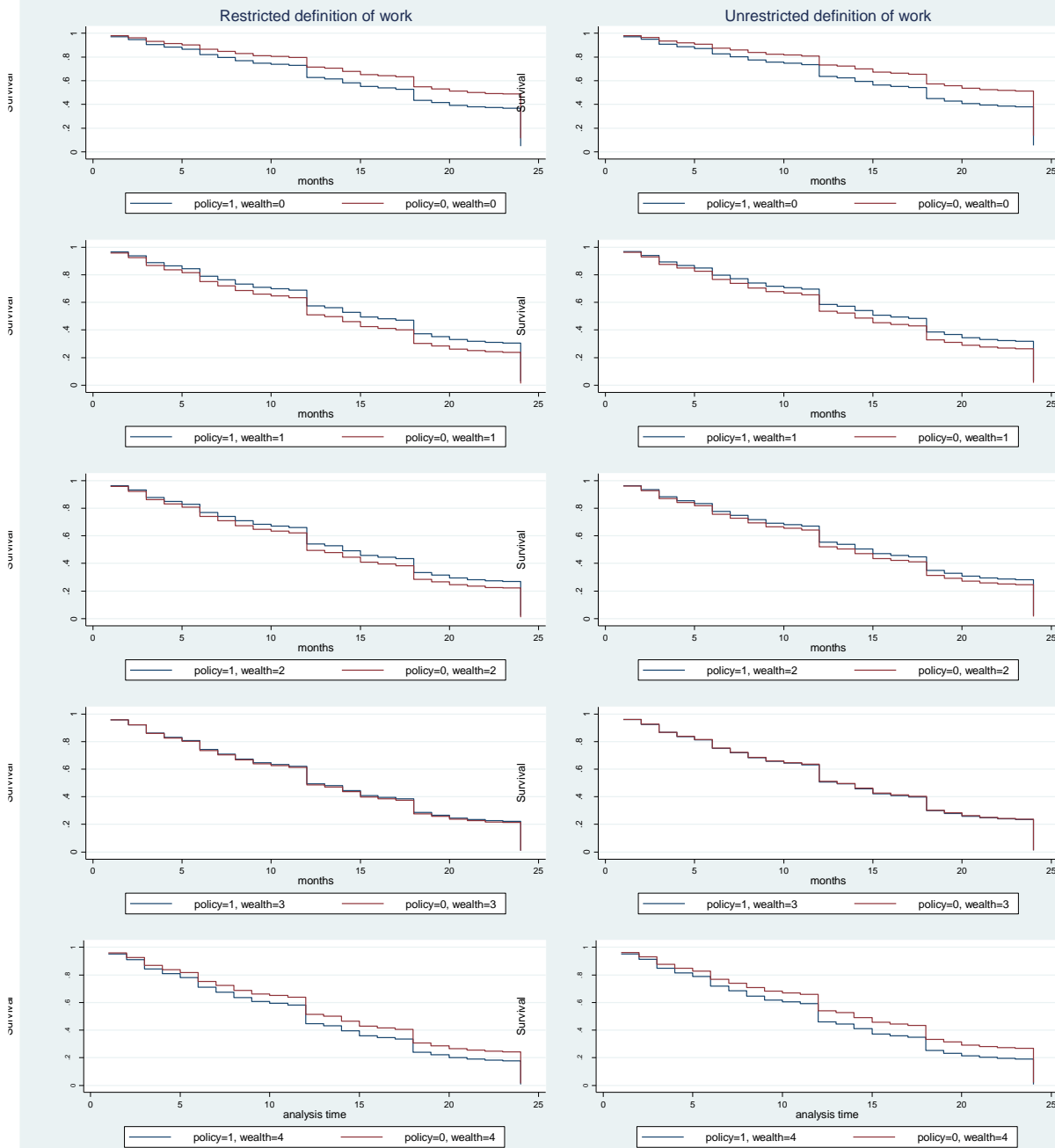


Figure VII. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted a policy to ensure breast feeding breaks at work (N=42,643; policy: Benin, Cameroon, Chad, Democratic Republic of Congo, Ghana, Guinea, Lesotho, Madagascar, Mali, Nigeria, Sao Tome et Principe, Swaziland, Tanzania; no policy: Kenya, Liberia, Malawi, Namibia, Sierra Leone, Zambia)

Cox proportional hazards models At least 6 months of mat leave or BBW, Region: Americas



Figure

VIII. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted a policy to ensure at least 4 months of maternity leave or breast feeding breaks at work (N=2,917; policy: Bolivia, Colombia, Dominican Republic, Peru; no policy: Guyana)

Cox proportional hazards models At least 6 months of mat leave or BBW, Region: South Asia

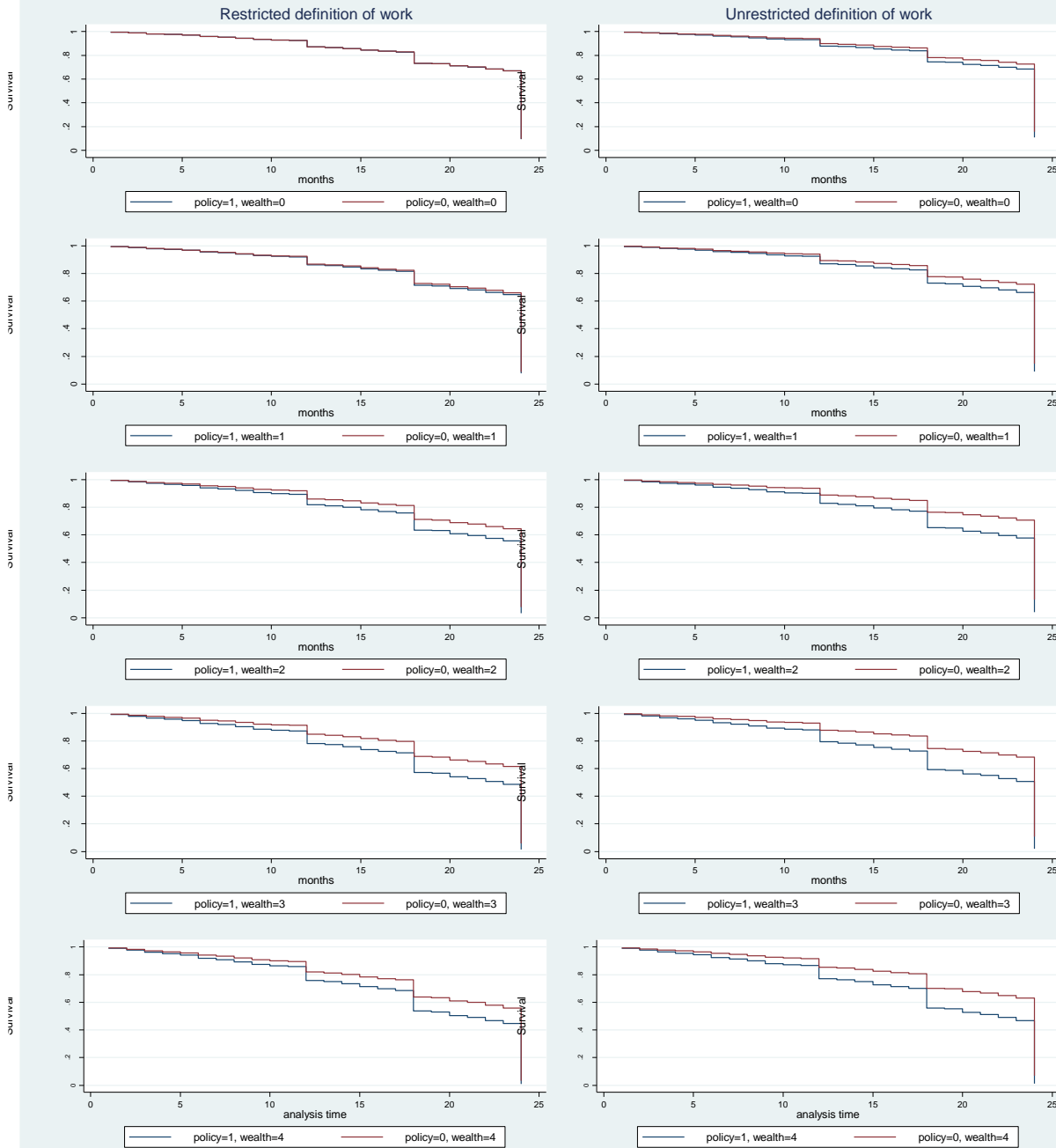


Figure IX. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted a policy to ensure at least 4 months of maternity leave or breast feeding breaks at work (N=7,265; policy: India, Maldives; no policy: Bangladesh)

Cox proportional hazards models At least 6 months of mat leave or BBW, Region: Sub-Saharan Africa

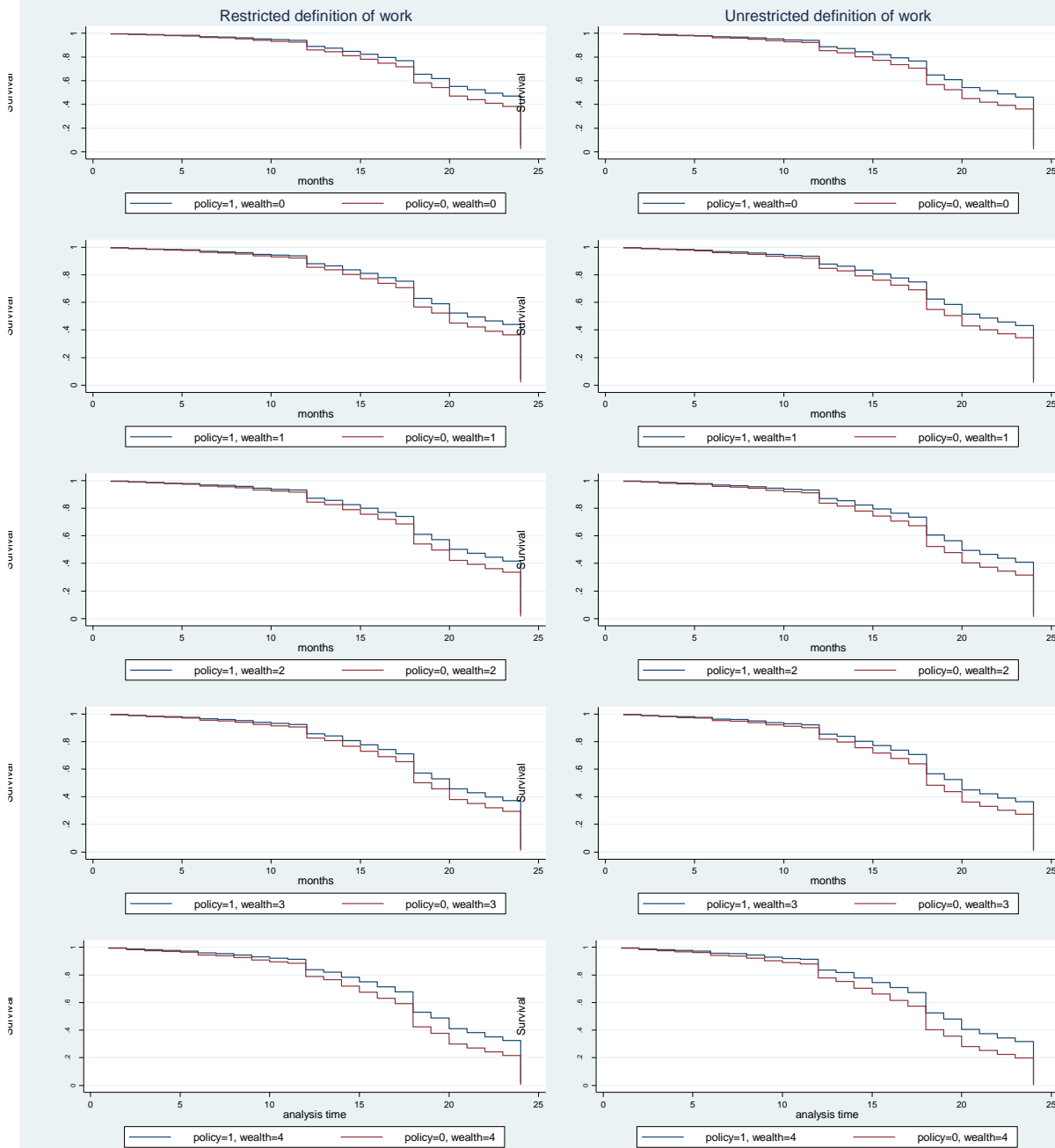


Figure X. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted a policy to ensure at least 4 months of maternity leave or breast feeding breaks at work (N=38,475; policy: Benin, Cameroon, Chad, Democratic Republic of Congo, Ghana, Guinea, Lesotho, Madagascar, Mali, Nigeria, Sao Tome et Principe; no policy: Kenya, Liberia, Malawi, Namibia, Sierra Leone, Swaziland, Tanzania, Zambia)

Cox proportional hazards models At least 14 weeks of paid maternity leave, Region: Europe & Central Asia

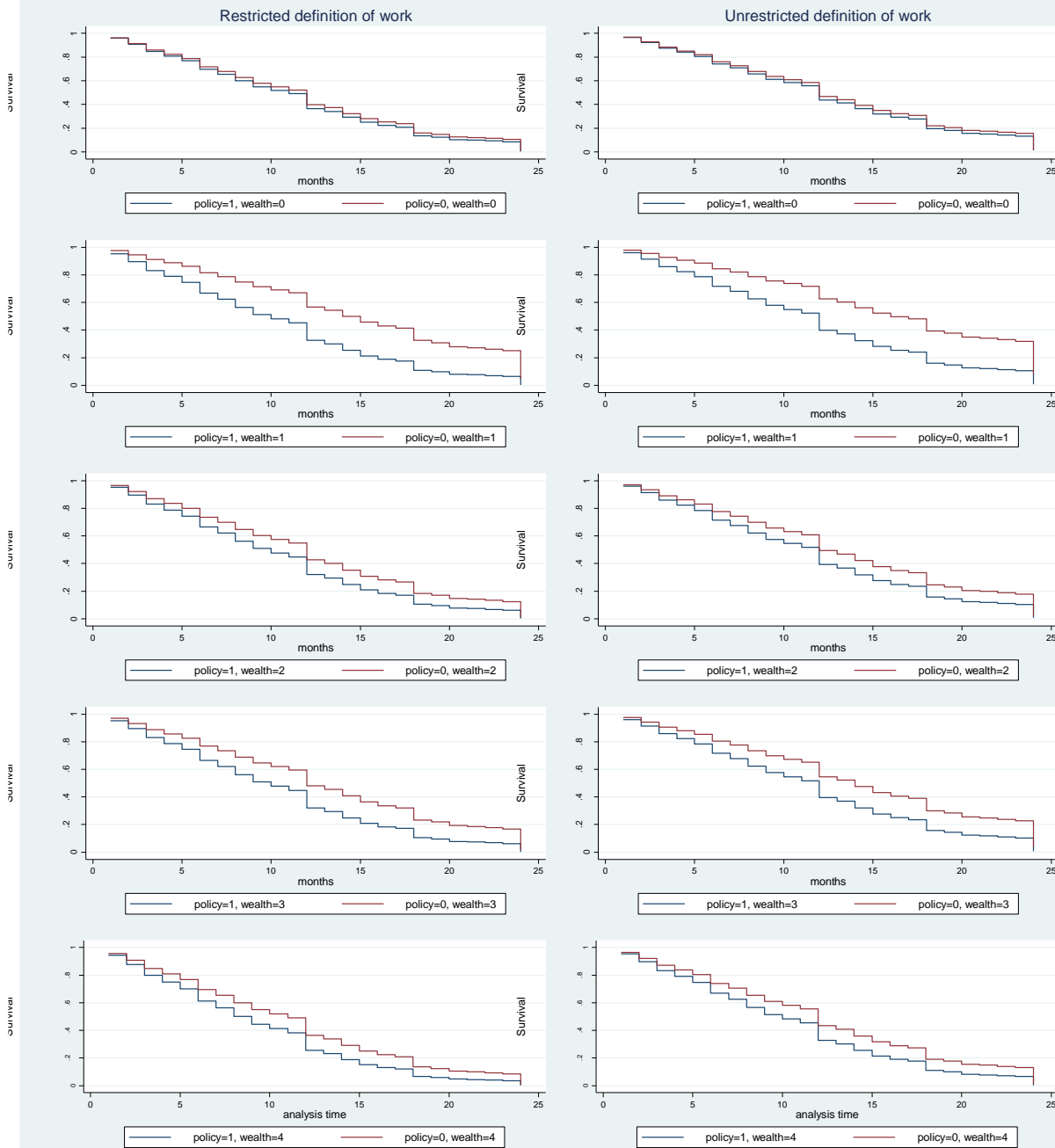


Figure XI. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted at least 14 weeks of paid maternity leave (N=4,950; policy: Albania, Azerbaijan, Moldova, Ukraine, Turkey; no policy: Turkey)

Cox proportional hazards models At least 14 weeks of paid maternity leave, Region: South Asia

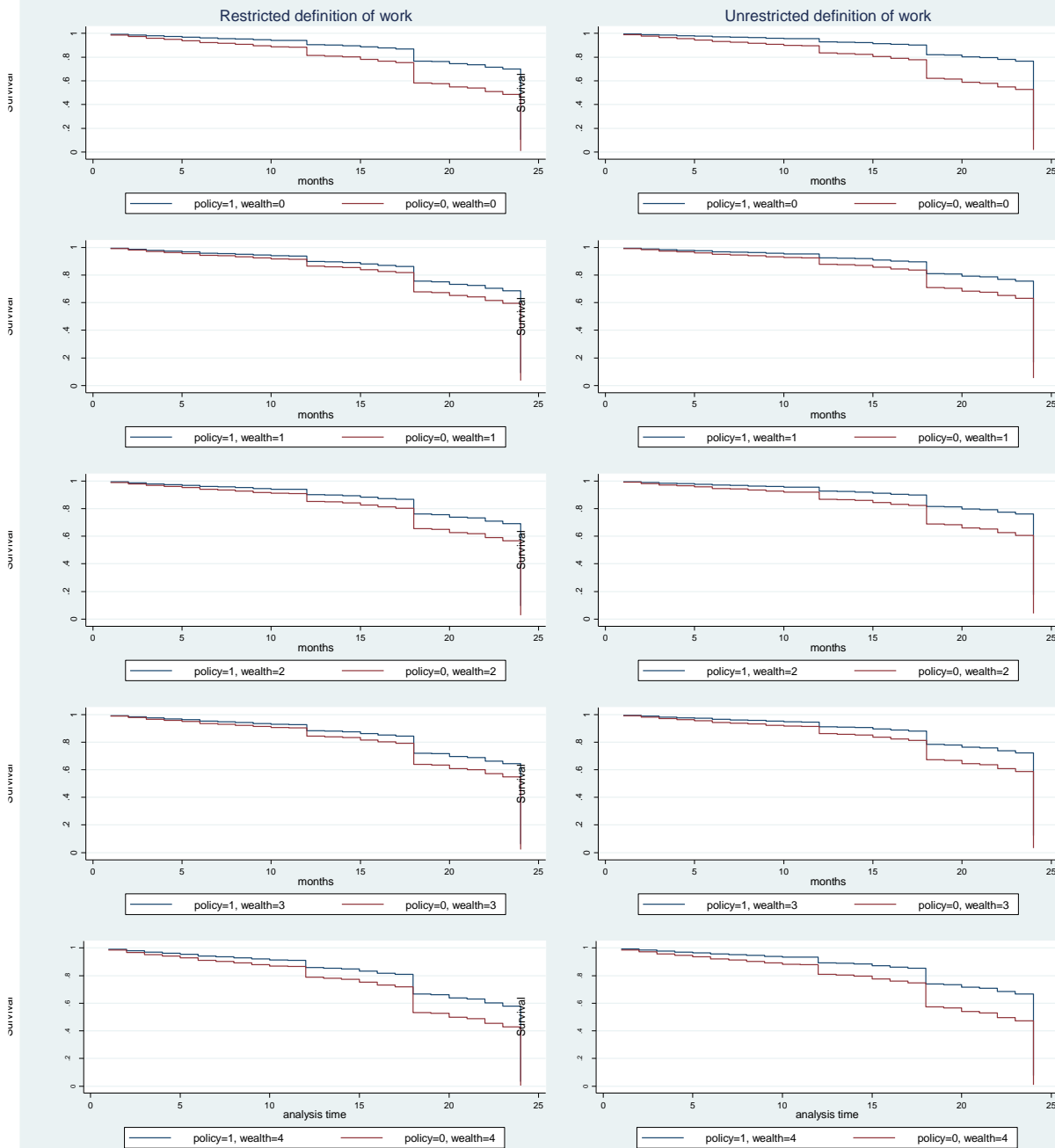


Figure XII. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted at least 14 weeks of paid maternity leave (N=4,338; policy: Bangladesh; no policy: Bangladesh, India, Maldives)

Cox proportional hazards models At least 14 weeks of paid maternity leave, Region: Sub-Saharan Africa

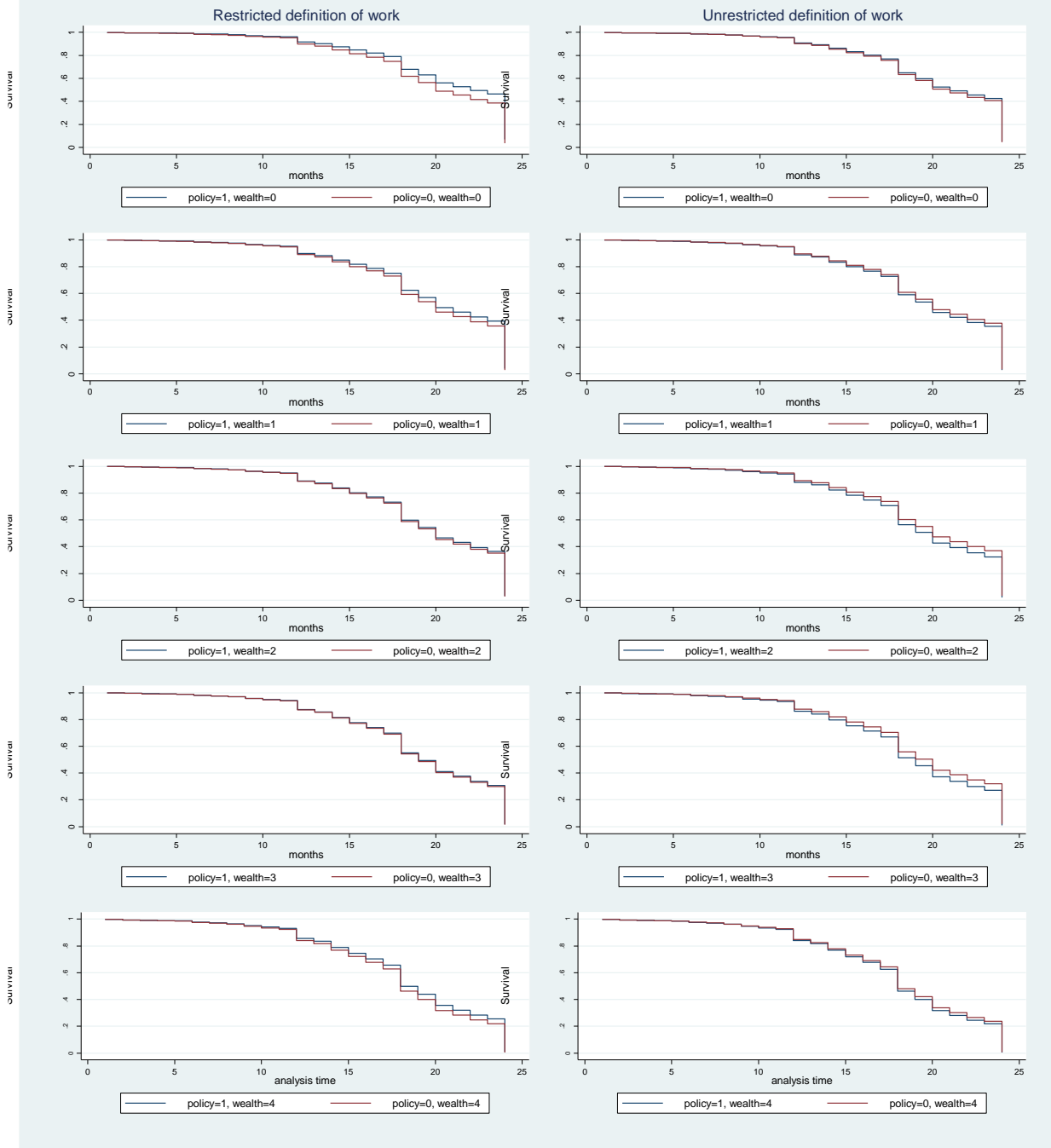


Figure XIII. Stratified Cox proportional hazards models used to estimate the survival curves for cessation of breastfeeding in countries that had and had not enacted at least 14 weeks of paid maternity leave (N=44,082; policy: Benin, Cameroon, Chad, Democratic Republic of Congo, Guinea, Madagascar, Mali, Namibia, Nigeria, Sao Tome et Principe, Sierra Leone, Swaziland, Tanzania, Zambia; no policy: Ghana, Kenya, Lesotho, Liberia, Malawi, Namibia, Nigeria, Sao Tome et Principe, Sierra Leone, Swaziland, Tanzania, Zambia)

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Online resource 1. Description of Policy Database

From 2013 to 2014, McGill University's MACHEquity research group (<http://machequity.com/>) expanded the 2012 dataset on breastfeeding breaks at work and maternity leave policies collected by the UCLA's WORLD Policy Analysis Center (<http://world.ph.ucla.edu/>) to include information on country level policy changes from 1995 to 2011. The longitudinal policy database was created through a systematic review of primary labor legislation supplemented with information from secondary sources as necessary. For every year between 1995 and 2012, information was collected on whether breastfeeding breaks at work (BBW) were legislated for female employees, whether they were paid for these breaks, and the duration of their entitlement to BBW following birth. Longitudinal information on maternity leave policies included the availability of paid leave for mothers to care for their infants and the length of the leave.

The primary sources used to construct the database were national labor and social security laws. The full-text copies of these laws and information on the history of amendment and repeal of such laws were identified through the International Labor Organization's (ILO) NATLEX database and TRAVAIL, the ILO's Working Conditions Laws Database. When full-text labor legislation was not available through NATLEX or TRAVAIL, researchers located this legislation through country websites and other sources, such as the World Bank's Women, Business and Law website (<http://wbl.worldbank.org/>); Lexadin; and the World Legal Information Institute (<http://www.worldlii.org/>). In some cases, hard copies of legislation were obtained from the McGill University library.

Original or translated versions of legislation were strongly preferred, but locating repealed laws that dated back to 1995 was not always possible. Secondary sources were used if the search for a copy of the primary legislation had been exhausted, or if the content of such legislation was difficult to interpret due to unclear text or amendments related to the legislation of interest. If secondary sources were used, they came from reliable organizations including the ILO; the Organization for Economic Co-Operation and Development; the U.S. Social Security Administration; the European Commission; the Council of Europe; the International Social Security Association; and the International Network on Leave Policies and Research.

We used additional secondary sources such as the ILO's Conditions of Work Digest 1994 and the ILO's 2014 Maternity and Paternity at Work report to clarify findings or to fill in missing details. The ILO's Maternity Protection Database was used for additional information on breastfeeding policies when primary sources were unavailable. Ad-hoc secondary sources that did not systematically collect comparative information about multiple countries were used as a last resort (e.g. journal articles, individual country reports, etc.).

In order to provide longitudinal information on the changes in breastfeeding breaks and maternity leave provisions over time, the database includes all changes to national legislation between 1995 and 2012 in 36 countries. For each country, two researchers from our multilingual team independently coded relevant information and compared their results to ensure accuracy. Coding was conducted in the original language of the document by team members fluent in that language, or using an official translation. The dataset includes information on national policies and does not capture subnational policies, industry-specific policies, or policies based on collective agreements available to subgroups of employees. In countries with federal systems, the amount guaranteed to the highest proportion of the population is recorded for the entire country; the legislation applicable to the most populated state or province is assumed to apply to the entire country. If a majority of a country's population resides in states or provinces that lack these legislated protections, the entire country is considered as not having implemented the policy.

The length of breastfeeding breaks at work in our dataset is captured by the child's age. For countries that legislate the length of breastfeeding breaks as time after a mother returns to work and a mother is also entitled to paid maternity leave, the duration of the breast feeding breaks benefit is the sum of maximum post-birth paid maternity leave and the breastfeeding break entitlement. Although countries legislate breastfeeding breaks of varying durations (1 hour per day, 1.5 hours per day, etc.), the dataset used in this paper does not distinguish between different daily lengths of breaks.

When constructing the database on maternal leave policies, we recorded the legislated duration of leave available to mothers only (excluding leave that can be shared by both parents) without distinguishing between prenatal and postnatal portions of leave because information on the duration of postnatal and prenatal maternity leave is often not explicitly stated in the laws. We report the leave available under normal conditions and do not include additional entitlements for extraordinary circumstance such as: multiple births, subsequent births, or childbirth complications. In recording the length of paid leave, we assumed that women meet all of the conditions that would qualify them to receive replacement payments such as: work tenure and payments into Social Security.

Online Resource 2.

Appendix Table I. Mean bias in the breastfeeding initiation matched sample, using 1:1 nearest neighbor propensity score matching with a various caliper sizes, breast feeding breaks at work

	The Presence of Legislated Breast Feeding Breaks at Work Policies				
	Mean bias	Untreated participants in matched sample	Treated participants in matched sample	Countries with policy	Countries without policy
Unmatched sample	21.5				
With replacement					
No Caliper	13.2	472376	236188	44	13
Caliper					
0.1	13.2	472376	236188	44	13
0.2	13.2	472376	236188	44	13
0.3	13.2	472376	236188	44	13
0.4	13.2	472376	236188	44	13
0.5	13.2	472376	236188	44	13
0.01	13	469978	234989	44	13
0.02	13.2	472068	236034	44	13
0.03	13.2	472174	236087	44	13
0.04	13.2	472302	236151	44	13
0.05	13.2	472344	236172	44	13
Without replacement					
No Caliper	8	117148	58574	29	13
Caliper					
0.01	3.2	96078	48039	43	13
0.02	4.3	96512	48256	43	13
0.03	5.1	96980	48490	43	13
0.04	6	97366	48683	42	13
0.05	7	97842	48921	41	13
0.001	2.4 ^b	95572	47786	43	13
0.002	2.7	95680	47840	43	13
0.003	2.7	95748	47874	43	13
0.004	2.8	95802	47901	43	13
0.005	3	95856	47928	43	13

^aMean bias is the difference in the sample mean between the exposed and the unexposed groups.

^bCaliper selected for the initiation analysis

Appendix Table II. Mean bias in the breastfeeding initiation matched sample, using 1:1 nearest neighbor propensity score matching with a various caliper sizes, at least 6 months of breast feeding breaks at work or maternity leave

The presence of policies that legislate at least 6 months of breast feeding breaks at work or maternity leave					
	Mean bias	Untreated participants in matched sample	Treated participants in matched sample	Countries with policy	Countries without policy
Unmatched sample	23.6				
With replacement					
No Caliper	14.6	456304	228152	42	14
Caliper					
0.1	14.6	456304	228152	42	14
0.2	14.6	456304	228152	42	14
0.3	14.6	456304	228152	42	14
0.4	14.6	456304	228152	42	14
0.5	14.6	456304	228152	42	14
0.01	14.6	455720	227860	42	14
0.02	14.6	456296	228148	42	14
0.03	14.6	456302	228151	42	14
0.04	14.6	456304	228152	42	14
0.05	14.6	456304	228152	42	14
Without replacement					
No Caliper	5.2	127058	63529	32	14
Caliper					
0.01	3.6	106978	53489	42	14
0.02	4.2	107094	53547	41	14
0.03	5.1	107150	53575	41	14
0.04	5.8	107154	53577	41	14
0.05	6.4	107154	53577	41	14
0.001	2.9	106484	53242	42	14
0.002 ^b	2.9	106830	53415	42	14
0.003	3.5	106890	53445	42	14
0.004	3.5	106910	53455	42	14
0.005	3.5	106918	53459	42	14

^aMean bias is the difference in the sample mean between the exposed and the unexposed groups.

^bCaliper selected for the initiation analysis

Appendix Table III. Mean bias in the breastfeeding initiation matched sample, using 1:1 nearest neighbor propensity score matching with a various caliper sizes, duration of maternity leave

The presence of policies that legislate at least 14 weeks of paid maternity leave					
	Mean bias ^a	Untreated participants in matched sample	Treated participants in matched sample	Countries with policy	Countries without policy
Unmatched sample	23.3				
With replacement					
No Caliper	7.5	166400	83200	22	37
Caliper					
0.1	7.5	166400	83200	22	37
0.2	7.5	166400	83200	22	37
0.3	7.5	166400	83200	22	37
0.4	7.5	166400	83200	22	37
0.5	7.5	166400	83200	22	37
0.01	7.5	166400	83200	22	37
0.02	7.5	166400	83200	22	37
0.03	7.5	166400	83200	22	37
0.04	7.5	166400	83200	22	37
0.05	7.5	166400	83200	22	37
Without replacement					
No Caliper	6.8	166400	83200	22	37
Caliper					
0.01	3.8	113964	56982	22	37
0.02	3.8	114260	57130	22	37
0.03	3.8	114260	57130	22	37
0.04 ^b	3.7	114260	57130	22	37
0.05	3.8	114260	57130	22	37
0.001	3.9	113188	56594	22	37
0.002	4	113358	56679	22	37
0.003	3.9	113426	56713	22	37
0.004	3.9	113508	56754	22	37
0.005	3.8	113594	56797	22	37

^aMean bias is the difference in the sample mean between the exposed and the unexposed groups.

^bCaliper selected for the initiation analysis

Appendix Table IV. Mean bias in the breastfeeding duration matched sample, using 1:1 nearest neighbor propensity score matching with a various caliper sizes, breast feeding breaks at work

	The Presence of Legislated Breast Feeding Breaks at Work Policies				
	Mean bias ^a	Untreated participants in matched sample	Treated participants in matched sample	Countries with policy	Countries without policy
Unmatched sample	26.9				
With replacement					
No Caliper	20.4	362910	181455	27	10
Caliper					
0.1	20.4	362910	181455	27	10
0.2	20.4	362910	181455	27	10
0.3	20.4	362910	181455	27	10
0.4	20.4	362910	181455	27	10
0.5	20.4	362910	181455	27	10
0.01	18.4	347644	173822	27	10
0.02	20.4	362910	181455	27	10
0.03	20.4	362910	181455	27	10
0.04	20.4	362910	181455	27	10
0.05	20.4	362910	181455	27	10
Without replacement					
No Caliper	8	95366	47683	23	10
Caliper					
0.01 ^b	6.6	70784	35392	25	10
0.02	7.1	70784	35392	24	10
0.03	7.3	70784	35392	24	10
0.04	7.9	70784	35392	23	10
0.05	8.4	70784	35392	24	10
0.001	6.6	70092	35046	25	10
0.002	6.7	70464	35232	26	10
0.003	6.9	70660	35330	25	10
0.004	6.7	70776	35388	26	10
0.005	6.5	70784	35392	25	10

^aMean bias is the difference in the sample mean between the exposed and the unexposed groups.

^bCaliper selected for the duration analysis

Appendix Table VI. Mean bias in the breastfeeding duration matched sample, using 1:1 nearest neighbor propensity score matching with a various caliper sizes, maternal leave policies or breast feeding breaks at work

The presence of policies that legislate at least 6 months of breast feeding breaks at work or maternity leave					
	Mean bias ^a	Untreated participants in matched sample	Treated participants in matched sample	Countries with policy	Countries without policy
Unmatched sample	28.9				
With replacement					
No Caliper	17.6	346838	173419	25	11
Caliper					
0.1	17.6	346838	173419	25	11
0.2	17.6	346838	173419	25	11
0.3	17.6	346838	173419	25	11
0.4	17.6	346838	173419	25	11
0.5	17.6	346838	173419	25	11
0.01	17.6	346838	173419	25	11
0.02	17.6	346838	173419	25	11
0.03	17.6	346838	173419	25	11
0.04	17.6	346838	173419	25	11
0.05	17.6	346838	173419	25	11
Without replacement					
No Caliper	11.6	105276	52638	23	11
Caliper					
0.01	5.7	67656	33828	25	11
0.02	6	68170	34085	25	11
0.03	6.2	68336	34168	25	11
0.04	6.6	68336	34168	24	11
0.05	7	68336	34168	24	11
0.001	5.3	67008	33504	25	11
0.002	5.4	67266	33633	25	11
0.003 ^b	5.1	67314	33657	25	11
0.004	5.4	67370	33685	25	11
0.005	5.6	67422	33711	25	11

^aMean bias is the difference in the sample mean between the exposed and the unexposed groups.

^bCaliper selected for the duration analysis

Appendix Table VII. Mean bias in the breastfeeding duration matched sample, using 1:1 nearest neighbor propensity score matching with a various caliper sizes, at least 14 weeks of paid maternity leave

The presence of policies that legislate at least 14 weeks of paid maternity leave					
	Mean bias ^a	Untreated participants in matched sample	Treated participants in matched sample	Countries with policy	Countries without policy
Unmatched sample	30.7				
With replacement					
No Caliper	13.4	119378	59689	14	25
Caliper					
0.1	13.4	119378	59689	14	25
0.2	13.4	119378	59689	14	25
0.3	13.4	119378	59689	14	25
0.4	13.4	119378	59689	14	25
0.5	13.4	119378	59689	14	25
0.01	13.4	119378	59689	14	25
0.02	13.4	119378	59689	14	25
0.03	13.4	119378	59689	14	25
0.04	13.4	119378	59689	14	25
0.05	13.4	119378	59689	14	25
Without replacement					
No Caliper	9.8	119378	59689	14	25
Caliper					
0.01	6.3	62562	31281	14	25
0.02	6.4	62916	31458	14	25
0.03	6.2	63908	31954	14	25
0.04	6.2	64726	32363	14	25
0.05 ^b	6.1	65122	32561	14	25
0.001	6.6	61712	30856	14	25
0.002	6.6	61898	30949	14	25
0.003	6.8	62082	31041	14	25
0.004	6.6	62302	31151	14	25
0.005	6.5	62458	31229	14	25

^aMean bias is the difference in the sample mean between the exposed and the unexposed groups.

^bCaliper selected for the duration analysis

Online Resource 3. Restricted definition of work

The restricted definition of work used in this analysis is based on a number of variables measured at the country level and not measured consistently across DHS countries.

The different types of questions asked about women’s work are listed below. In Table 1, we present the number of countries that ask each specific question about work

1. Aside from your own housework, have you done any work in the last seven days?
2. As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. In the last seven days, have you done any of these things or any other work?
3. Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, maternity leave or any other such reason?
4. Have you done any work in the last 12 months?
5. **What is your occupation, that is, what kind of work do you mainly do?**
6. Do you do this work for a member of your family, for someone else, or are you self-employed?
7. Do you usually work at home or away from home?
8. Are you paid in cash or kind for this work or are you not paid at all?
9. Work-related questions

	Asked in how many countries (n=57)	Percentage missing (overall)
Where you work (at home, away)	30	72%
Work last year	56	2%
Who is your employer (self/family, other)	54	46%
Have you ever had a job	2	97%
How are you paid (cash or in kind, in kind only, not paid)	56	42%
Occupation (Domestic/agriculture, Not domestic/agriculture)	55	3.5%
Respondent currently working	57	0
Any work	57	0
Work that would be more likely to be influenced by policy	57	0

*current work status was not used in the definition of any work or in the more restricted definition

